Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL GUIDELINE CLEARINGHOUSE

General

Guideline Title

KDIGO clinical practice guideline for lipid management in chronic kidney disease.

Bibliographic Source(s)

KDIGO clinical practice guideline for lipid management in chronic kidney disease. Kidney Int Suppl. 2013 Nov;3(3):259-305. [114 references]

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Recommendations

Major Recommendations

Definitions of the strength of recommendation (Level 1, Level 2, or Not Graded), and the quality of the supporting evidence (A-D) are provided at the end of the 'Major Recommendations' field.

Assessment of Lipid Status in Adults with Chronic Kidney Disease (CKD)

- In adults with newly identified CKD (including those treated with chronic dialysis or kidney transplantation), the Work Group recommends evaluation with a lipid profile (total cholesterol, low-density lipoprotein [LDL] cholesterol, high-density lipoprotein [HDL] cholesterol, triglycerides). (1C)
- In adults with CKD (including those treated with chronic dialysis or kidney transplantation), follow-up measurement of lipid levels is not required for the majority of patients. (Not Graded)

Pharmacological Cholesterol-lowering Treatment in Adults

- In adults aged ≥50 years with estimated glomerular filtration rate (eGFR) <60 ml/min/1.73 m^2 but not treated with chronic dialysis or kidney transplantation (GFR categories G3a-G5), the Work Group recommends treatment with a statin or statin/ezetimibe combination. (1A)
- In adults aged ≥50 years with CKD and eGFR ≥60 ml/min/1.73m^2 (GFR categories G1-G2) the Work Group recommends treatment with a statin. (1B)
- In adults aged 18–49 years with CKD but not treated with chronic dialysis or kidney transplantation, the Work Group suggests statin treatment in people with one or more of the following (2A):

    - Known coronary disease (myocardial infarction or coronary revascularization)
    - Diabetes mellitus
    - Prior ischemic stroke
    - Estimated 10-year incidence of coronary death or non-fatal myocardial infarction >10%
- In adults with dialysis-dependent CKD, the Work Group suggests that statins or statin/ezetimibe combination not be initiated. (2A)
- In patients already receiving statins or statin/ezetimibe combination at the time of dialysis initiation, the Work Group suggests that these agents be continued. (2C)
- In adult kidney transplant recipients, the Work Group suggests treatment with a statin. (2B)

Assessment of Lipid Status in Children with CKD

- In children with newly identified CKD (including those treated with chronic dialysis or kidney transplantation), the Work Group recommends evaluation with a lipid profile (total cholesterol, LDL cholesterol, HDL cholesterol, triglycerides). (1C)
- In children with CKD (including those treated with chronic dialysis or kidney transplantation), the Work Group suggests annual follow-up measurement of fasting lipid levels. (Not Graded)

Pharmacological Cholesterol-lowering Treatment in Children

In children less than 18 years of age with CKD (including those treated with chronic dialysis or kidney transplantation), the Work Group suggests that statins or statin/ezetimibe combination not be initiated. (2C)

Triglyceride-lowering Treatment in Adults

In adults with CKD (including those treated with chronic dialysis or kidney transplantation) and hypertriglyceridemia, the Work Group suggests that therapeutic lifestyle changes be advised. (2D)

Triglyceride-lowering Treatment in Children

In children with CKD (including those treated with chronic dialysis or kidney transplantation) and hypertriglyceridemia, the Work Group suggests that therapeutic lifestyle changes be advised. (2D)

Definitions:

Strength of Recommendation

Grade*	Implications		
	Patients	Clinicians	Policy-makers
Level 1 "The Work Group recommends"	Most people in your situation would want the recommended course of action and only a small proportion would not.	Most patients should receive the recommended course of action.	The recommendation can be evaluated as a candidate for developing a policy or a performance measure.
Level 2 "The Work Group suggests"	The majority of people in your situation would want the recommended course of action, but many would not.	Different choices will be appropriate for different patients. Each patient needs help to arrive at a management decision consistent with her or his values and preferences.	The recommendation is likely to require substantial debate and involvement of stakeholders before policy can be determined.

*The additional category "Not Graded" was used, typically, to provide guidance based on common sense or where the topic does not allow adequate application of evidence. The most common examples include recommendations regarding monitoring intervals, counseling, and referral to other clinical specialists. The ungraded recommendations are generally written as simple declarative statements, but are not meant to be interpreted as being stronger recommendations than Level 1 or 2 recommendations.

Final Grade for Overall Quality of Evidence

Grade	Quality of Evidence	Meaning

Grade	Quality of Evidence	Meaning
A	High	The Work Group is confident that the true effect lies close to that of the estimate of the effect.
B	Moderate	The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.
C	Low	The true effect may be substantially different from the estimate of the effect.
D	Very Low	The estimate of effect is very uncertain, and often will be far from the truth.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

- Chronic kidney disease (CKD)
- Dyslipidemia

Guideline Category

Counseling

Evaluation

Management

Prevention

Screening

Treatment

Clinical Specialty

Cardiology

Critical Care

Family Practice

Internal Medicine

Nephrology

Pediatrics

Preventive Medicine

Intended Users

Advanced Practice Nurses

Health Care Providers

Nurses

Pharmacists

Physician Assistants

Physicians

Guideline Objective(s)

- To develop an evidence based clinical practice guideline (CPG) for the management of dyslipidemia and chronic kidney disease (CKD)
- To assist the practitioner caring for patients with CKD and dyslipidemia and to prevent deaths, cardiovascular disease (CVD) events, and progression to kidney failure while optimizing patients' quality of life

Target Population

Adults and children with chronic kidney disease (CKD) and dyslipidemia

Interventions and Practices Considered

1. Evaluation with a lipid profile, including follow-up measurement in children
2. Initiation of statin treatment for adults, as indicated
    - Statins
    - Statin/ezetimibe combination
3. Therapeutic lifestyle changes

Note: Statin treatment is considered but not recommended in children.

Major Outcomes Considered

- Mortality, including cardiovascular mortality
- Cardiovascular and cerebrovascular events
- End-stage renal disease
- Graft failure
- Changes in serum creatinine and glomerular filtration rate
- Changes in total cholesterol, low-density lipoprotein cholesterol, and high-density lipoprotein cholesterol
- Adverse events

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Systematic search strategies were developed by the evidence review team (ERT) with input from the Work Group Co-Chairs. Modules were created for randomized controlled trials (RCTs), kidney disease, dyslipidemia, and lipid lowering agents. For the primary search, search terms were limited to the year 2000 and later to capture trials that would affect current clinical practice and because the Kidney Disease: Improving Global Outcomes (KDOQI) dyslipidemia guideline covered through 2000. Five new topics were added to the KDOQI systematic review for studies in the general population: effect of diet or lifestyle modification; an update of drug interactions with statins and fibrates; changes in low-

density lipoprotein cholesterol (LDL-C) levels associated with various statins; adverse events from statin and fibrate use; and frequency of lipid-level testing. These searches were not restricted to 2000 and later. The text words or medical subject headings (MeSH) that were included are provided in the Supplemental Appendix 1 in the original guideline document. In addition, the ERT searched for existing relevant systematic reviews. The final searches were conducted in August 2011. The ERT searched MEDLINE, Cochrane Central Register of Controlled Trials, and Cochrane Database of Systematic Reviews. The ERT also relied on Work Group members to identify large, general population RCTs reporting on chronic kidney disease (CKD) subgroups. The search yield was also supplemented by articles provided by Work Group members through June 2013.

For selection of studies, all members of ERT independently and manually screened the abstracts using the computerized screening program Abstrackr. To establish relevance and consensus among reviewers, the entire team screened and achieved consensus on an initial batch of 500 abstracts. A total of 11,337 citations were initially screened. Journal articles reporting original data, meta-analyses, and systematic reviews were selected for evidence review, based on *a priori* criteria for eligible evidence. Editorials, letters, abstracts, unpublished reports, and articles published in non–peer-reviewed journals were not included. The Work Group also decided to exclude publications from journal supplements because of potential differences in the process of how they are solicited, selected, reviewed, and edited compared to peer-reviewed publications. The overall search yield along with the number of abstracts identified and articles reviewed for each topic are presented in Table 8 in the original guideline document.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Grading of Recommendations Assessment, Development and Evaluation (GRADE) System for Grading Quality of Evidence for an Outcome

Step 1: Starting Grade for Quality of Evidence Based on Study Design	
Randomized trials	High
Observational study	Low
Any other evidence	Very low
Step 2: Reduce Grade	
Study quality	-1 level if serious limitations -2 levels if very serious limitations
Consistency	-1 level if important inconsistency
Directness	-1 level if some uncertainty -2 levels if major uncertainty
Other	-1 level if sparse or imprecise data[c] -1 level if high probability of reporting bias
Step 3: Raise Grade	
Strength of association	+1 level if strong,[a] no plausible confounders +2 levels if very strong,[b] no major threats to validity
Other	+1 level if evidence of a dose–response gradient +1 level if all residual plausible confounders would have reduced the observed effect
Final Grade for Quality of Evidence and Definition	

High	Further research is unlikely to change confidence in the estimate of the effect.
Moderate	Further research is likely to have an important impact on confidence in the estimate of effect, and may change the estimate.
Low	Further research is very likely to have an important impact on confidence in the estimate, and may change the estimate.
Very low	Any estimate of effect is very uncertain.

[a]Strong evidence of association is defined as 'significant relative risk (RR) of >2 (<0.5)' based on consistent evidence from two or more observational studies, with no plausible confounders.

[b]Very strong evidence of association is defined as 'significant RR of >5 (<0.2)' based on direct evidence with no major threats to validity.

[c]Sparse if there is only one study or if total N <100. Imprecise if there is a low event rate (0 or 1 event) in either arm or confidence interval spanning a range <0.5 to >2.0.

Adapted by permission from Macmillan Publishers Ltd, *Kidney International*. Uhlig et al. Grading evidence and recommendations for clinical practice guidelines in nephrology. A position statement from Kidney Disease: Improving Global Outcomes (KDIGO). Kidney Int 2006; 70: 2058–2065.

Final Grade for Overall Quality of Evidence

Grade	Quality of Evidence	Meaning
A	High	The Work Group is confident that the true effect lies close to that of the estimate of the effect.
B	Moderate	The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.
C	Low	The true effect may be substantially different from the estimate of the effect.
D	Very Low	The estimate of effect is very uncertain, and often will be far from the truth.

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Data Extraction

Data extraction was done by an evidence review team (ERT) member. Although no duplicate extraction was independently performed, data from each study was examined by another reviewer to confirm accuracy. The ERT, in consultation with the Work Group Co-Chairs, designed forms to capture data on design, methodology, sample characteristics, interventions, comparators, outcomes, results, and limitations of individual studies. Methodology and outcomes were also systematically graded (see the section on grading below) and recorded during the data extraction process.

Summary Tables

Summary tables were developed for each comparison of interest. Summary tables contain outcomes of interest, relevant population characteristics, description of intervention and comparator, results, and quality grading for each outcome. Categorical outcomes and continuous lipid outcomes were tabulated separately. For studies not exclusively examining chronic kidney disease (CKD) populations, only those reporting analysis by CKD subgroups were tabulated. Work Group members proofed all summary table data and quality assessments. Summary tables are available at http://www.kdigo.org/home/guidelines/lipids .

Evidence Profiles

Evidence profiles were constructed to assess the quality and record quality grades and descriptions of effect for each outcome across studies, as well as the quality of overall evidence and description of net benefits or harms of the intervention or comparator across all outcomes. These profiles aim to make the evidence synthesis process transparent. Decisions in the evidence profiles were based on data from the primary studies listed in corresponding summary tables and on judgments of the ERT and Work Group. When the body of evidence for a particular comparison of interest consisted of only one study, the summary table provided the final level of synthesis and an evidence profile was not generated. Each evidence profile was initially constructed by the ERT and then reviewed, edited, and approved by the Work Group. The work products created by the ERT for summarizing the evidence base are listed in Table 9 in the original guideline document.

Grading of Quality of Evidence for Outcomes of Individual Studies

Methodological quality (internal validity) refers to the design, conduct, and reporting of outcomes of a clinical study. A previously devised three-level classification system for quality assessment was used to grade the overall study quality and quality of all relevant outcomes in the study (see Table 10 in the original guideline document). Grading of individual studies was done by one of the reviewers, then confirmed by another, and finalized in a group meeting. Variations of this system have been used in most Kidney Disease Outcomes Quality Initiative (KDOQI) and all Kidney Disease: Improving Global Outcomes (KDIGO) guidelines and have been recommended by the US Agency for Healthcare Research and Quality Evidence-based Practice Center program.

Each study was given an overall quality grade based on its design, methodology (randomization, allocation, blinding, definition of outcomes, appropriate use of statistical methods, etc.), conduct (dropout percentage, outcome assessment methodologies, etc.) and reporting (internal consistency, clarity, thoroughness and precision, etc.). Each reported outcome was then evaluated and given an individual grade depending on the quality of reporting and methodological issues specific to that outcome. However, the quality grade of an individual outcome could not exceed the quality grade for the overall study.

Grading the Quality of Evidence and the Strength of a Guideline Recommendation

A structured approach, based on Grading of Recommendations Assessment, Development, and Evaluation (GRADE) and facilitated by the use of evidence profiles, was used to grade the quality of the overall evidence and the strength of recommendations. For each topic, the discussion on grading of the quality of the evidence was led by the ERT, and the discussion regarding the strength of the recommendations was led by the Work Group Co-Chairs. The "quality of a body of evidence" refers to the extent to which our confidence in an estimate of effect is sufficient to support a particular recommendation.

Grading the Quality of Evidence for Each Outcome Across Studies

Following GRADE, the quality of a body of evidence pertaining to a particular outcome of interest was initially categorized on the basis of study design. For questions of interventions, the initial quality grade was 'High' if the body of evidence consisted of RCTs, 'Low' if it consisted of observational studies, and 'Very Low' if it consisted of studies of other study designs. For questions of interventions, the Work Group decided to use only RCTs. The grade for the quality of evidence for each intervention–outcome pair was then lowered if there were serious limitations to the methodological quality of the aggregate of studies, if there were important inconsistencies in the results across studies, if there was uncertainty about the directness of evidence including limited applicability of the findings to the population of interest, if the data were imprecise (a low event rate [0 or 1 event] in either arm or a confidence interval [CI] spanning a range >1) or sparse (only 1 study or total N <500), or if there was thought to be a high likelihood of bias. Once consensus is reached in a group meeting, the final grade for the quality of the evidence for an intervention–outcome pair could be one of the following four grades: 'High', 'Moderate', 'Low' or 'Very Low' (see Table 11 in the original guideline document).

Grading the Overall Quality of Evidence

The quality of the overall body of evidence was then determined on the basis of the quality grades for all outcomes of interest, taking into account explicit judgments about the relative importance of each outcome. The resulting four final categories for the quality of overall evidence were: 'A', 'B', 'C' or 'D' (see Table 12 in the original guideline document).

See the original guideline document for CKD subgroup analyses and assessment of net health benefit across all important clinical outcomes.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Overview of Process

The development process for the *Kidney Disease: Improving Global Outcomes (KDIGO) Clinical Practice Guideline for Lipid Management in Chronic Kidney Disease (CKD)* included the following steps:

- Appointing Work Group members and the evidence review team (ERT)
- Discussing process, methods, and results
- Developing and refining topics
- Identifying populations, interventions or predictors, and outcomes of interest
- Selecting topics for systematic evidence review
- Standardizing quality assessment methodology
- Developing and implementing literature search strategies
- Screening abstracts and retrieving full-text articles on the basis of pre-defined eligibility criteria
- Creating data extraction forms
- Extracting data and performing critical appraisal of the literature
- Grading the methodology and outcomes in individual studies
- Tabulating data from individual studies into summary tables
- Grading quality of evidence for each outcome across studies, and assessing the overall quality of evidence across outcomes with the aid of evidence profiles
- Grading the strength of recommendations on the basis of the quality of evidence and other considerations
- Finalizing guideline recommendations and supporting rationales
- Sending the guideline draft for peer review to the KDIGO Board of Directors in August 2012 and for public review in November 2012
- Editing the guideline
- Publishing the final version of the guideline

The Work Group Co-Chairs, KDIGO Co-Chairs and ERT met for a two-day meeting to go over the guideline development process, evidence review topics, and systematic review findings. Following this, the Work Group, KDIGO Co-Chairs and KDIGO support staff met held a two-day meeting to revisit the available evidence, formulate recommendation statements, deliberate on rationale for recommendations, and to develop consensus.

Commissioning of Work Group and ERT

The KDIGO Co-Chairs appointed the Work Group Co- Chairs, who then assembled the Work Group of domain experts, including individuals with expertise in internal medicine, adult and pediatric nephrology, cardiology, hypertension, pharmacology, epidemiology, and endocrinology. The Tufts Center for Kidney Disease Guideline Development and Implementation at Tufts Medical Center in Boston, Massachusetts, USA, was contracted to conduct systematic evidence review and provide expertise in guideline development methodology. The ERT consisted of physicians–methodologists with expertise in nephrology and evidence based clinical practice guideline development, a project coordinator, a research assistant, and a project manager/medical writer.

Defining Scope and Topics

The Work Group Co-Chairs and the ERT defined the overall scope and goals of the guideline (including a list of critical and important outcomes) and then drafted a preliminary list of topics and key clinical questions. They also reviewed the topics in the Kidney Disease Outcomes Quality Initiative (KDOQI) guideline, which the ERT also had helped to develop. The Work Group and ERT further developed and refined each topic and specified screening criteria, literature search strategies, and data extraction forms (see Table 6 in the original guideline document).

Establishing the Process for Guideline Development

The ERT performed systematic literature searches and organized abstract and article screening. The ERT also coordinated the methodological and analytical processes, and defined and standardized the methodology for performing literature searches, data extraction, and summarizing the evidence. The Work Group took the primary role of writing the recommendation statements and rationales and retained final responsibility for their content. The Work Group Co-Chairs and the ERT prepared the first draft of the scope of work document as a series of open-ended questions to be considered by Work Group members.

Formulating Questions of Interest

Questions of interest were formulated according to the PICODD (Population, Intervention, Comparator, Outcome, study Design and Duration of follow-up) criteria. Details of the PICODD criteria are presented in Table 6 in the original guideline document.

Ranking of Outcomes

The Work Group ranked outcomes of interest on the basis of their importance for informing clinical decision making (see Table 7 in the original guideline document). Mortality, cardiovascular mortality, cardiovascular or cerebrovascular events, end-stage renal disease (ESRD), and graft failure were considered to be of critical importance; doubling of serum creatinine (SCr) and halving of glomerular filtration rate (GFR), high importance; and change in total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), or high-density lipoprotein cholesterol (HDL-C) or triglyceride (TG), moderate importance. The importance of adverse events was considered to depend on the event severity.

Grading the Quality of Evidence and the Strength of a Guideline Recommendation

A structured approach, based on Grading of Recommendations Assessment, Development, and Evaluation (GRADE) and facilitated by the use of evidence profiles, was used to grade the quality of the overall evidence and the strength of recommendations. For each topic, the discussion on grading of the quality of the evidence was led by the ERT, and the discussion regarding the strength of the recommendations was led by the Work Group Co-Chairs. The "strength of a recommendation" indicates the extent to which one can be confident that adherence to the recommendation will do more good than harm.

Developing the Recommendations

Draft recommendation statements were developed by the Work Group Co-Chairs and Work Group members with input from all Work Group members. The health benefits, side effects, and risks associated with each recommendation were considered when formulating the guideline, as well as information on patient preferences when available. Recommendation statements were revised in a multi-step process during teleconferences and a face-to-face meeting, as well as in subsequent drafts by email. All Work Group members provided feedback on initial and final drafts of the recommendation. The final draft was sent for internal and external peer review, and was further revised by the Work Group Co-Chairs and members. All Work Group members approved the final version of the guideline.

Grading the Strength of the Recommendations

The strength of a recommendation is graded as level 1 or level 2. Table 14 in the original guideline document shows the KDIGO nomenclature for grading the strength of a recommendation and the implications of each level for patients, clinicians, and policy-makers. Recommendations can be for or against doing something. Each recommendation includes an explicit link between the quality of the available evidence and the strength of that recommendation. However, Table 15 in the original guideline document shows that the strength of a recommendation is determined not only by the quality of the evidence but also by other, often complex judgments regarding the size of the net medical benefit (potential risks versus benefit), values, and preferences, and costs. Formal decision analyses including cost analysis were not conducted.

See the original guideline document for information about ungraded statements and the format for guideline recommendations.

Rating Scheme for the Strength of the Recommendations

Strength of Recommendation

Grade*	Implications		
	Patients	Clinicians	Policy-makers
Level 1 "The Work Group recommends"	Most people in your situation would want the recommended course of action and only a small proportion would not.	Most patients should receive the recommended course of action.	The recommendation can be evaluated as a candidate for developing a policy or a performance measure.
Level 2 "The Work Group suggests"	The majority of people in your situation would want the recommended course of action, but many would not.	Different choices will be appropriate for different patients. Each patient needs help to arrive at a management decision consistent with her or his values and preferences.	The recommendation is likely to require substantial debate and involvement of stakeholders before policy can be determined.

*The additional category "Not Graded" was used, typically, to provide guidance based on common sense or where the topic does not allow

adequate application of evidence. The most common examples include recommendations regarding monitoring intervals, counseling, and referral to other clinical specialists. The ungraded recommendations are generally written as simple declarative statements, but are not meant to be interpreted as being stronger recommendations than Level 1 or 2 recommendations.

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

Guidelines underwent internal review by the Kidney Disease: Improving Global Outcomes (KDIGO) Board in August 2012 and external public review in November 2012. Public review comments were compiled and fed back to the Work Group, which considered comments in its revision of the guideline.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate lipid management in patients with chronic kidney disease (CKD)

Potential Harms

The harms for each comparison of interventions are provided in summary tables and summarized in evidence profiles (see the "Availability of Companion Documents" field for supplementary materials).

Contraindications

Contraindications

- Statins are contraindicated in pregnant or breast-feeding females; in people with active liver disease; and in people with transaminase levels that are three times or more the upper limit of normal.
- Patients with chronic kidney disease (CKD) appear to be at increased risk of adverse events when statins and fibrates are used in combination (see Supplemental Tables 21–28 [see the "Availability of Companion Documents" field]). For this reason, the Work Group recommends that fibrates not be used concomitantly with statins in patients with CKD.

Qualifying Statements

Qualifying Statements

Use of the Clinical Practice Guideline

This Clinical Practice Guideline document is based upon systematic literature searches last conducted in August 2011, supplemented with additional evidence through June 2013. It is designed to provide information and assist decision making. It is not intended to define a standard of care, and should not be construed as one, nor should it be interpreted as prescribing an exclusive course of management. Variations in practice will inevitably and appropriately occur when clinicians take into account the needs of individual patients, available resources, and limitations unique to an institution or type of practice. Every health-care professional making use of these recommendations is responsible for evaluating the appropriateness of applying them in any particular clinical situation. The recommendations for research contained within this document are general and do not imply a specific protocol.

Limitations of Approach

Although the literature searches were intended to be comprehensive, they were not exhaustive. MEDLINE was the only database searched. Hand searches of journals were not performed, and review articles and textbook chapters were not systematically searched. However, any important studies known to domain experts that were missed by the electronic literature searches were added to retrieved articles and reviewed by the Work Group.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Audit Criteria/Indicators

Foreign Language Translations

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Living with Illness

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

KDIGO clinical practice guideline for lipid management in chronic kidney disease. Kidney Int Suppl. 2013 Nov;3(3):259-305. [114 references]

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2013 Nov

Guideline Developer(s)

Kidney Disease: Improving Global Outcomes - Nonprofit Organization

Source(s) of Funding

Kidney Disease: Improving Global Outcomes (KDIGO) gratefully acknowledges the founding sponsor, National Kidney Foundation, and the following consortium of sponsors that make our initiatives possible: Abbott, Amgen, Bayer Schering Pharma, Belo Foundation, Bristol-Myers Squibb, Chugai Pharmaceutical, Coca-Cola Company, Dole Food Company, Fresenius Medical Care, Genzyme, Hoffmann-LaRoche, International Society of Nephrology, JC Penney, Kyowa Hakko Kirin, NATCO—The Organization for Transplant Professionals, National Kidney Foundation (NKF)-Board of Directors, Novartis, Pharmacosmos, PUMC Pharmaceutical, Robert and Jane Cizik Foundation, Shire, Takeda Pharmaceutical, Transwestern Commercial Services, Vifor Pharma, and Wyeth.

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Guideline Committee

Kidney Disease: Improving Global Outcomes (KDIGO) Lipid Management Work Group

Composition of Group That Authored the Guideline

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Financial Disclosures/Conflicts of Interest

Kidney Disease: Improving Global Outcomes (KDIGO) makes every effort to avoid any actual or reasonably perceived conflicts of interest that may arise as a result of an outside relationship or a personal, professional, or business interest of a member of the Work Group. All members of the Work Group are required to complete, sign, and submit a disclosure and attestation form showing all such relationships that might be perceived as or are actual conflicts of interest. This document is updated annually and information is adjusted accordingly. All reported information is published in its entirely at the end of this document in the Work Group members' Biographic and Disclosure Section, and is kept on file at KDIGO.

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Guideline Availability

Electronic copies: Available from the Kidney Disease: Improving Global Outcomes Web site .

Availability of Companion Documents

The following are available:

- KDIGO clinical practice guideline for lipid management in chronic kidney disease. Appendices 1 & 2. Brussels (Belgium): Kidney Disease: Improving Global Outcomes; 2013 Nov. 8 p. Electronic copies: Available in Portable Document Format (PDF) from the Kidney Disease: Improving Global Outcomes (KDIGO) Web site .
- KDIGO clinical practice guideline for lipid management in chronic kidney disease. Supplemental tables. Brussels (Belgium): Kidney Disease: Improving Global Outcomes; 2013 Nov. 83 p. Electronic copies: Available in PDF from the KDIGO Web site .
- Methods for development of KDIGO clinical practice guidelines. Electronic copies: Available from the KDIGO Web site .

In addition, audit criteria are available in each chapter of the original guideline document. Translations of the guideline executive summary are available in Mandarin, German, and Russian from the KDIGO Web site .

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on April 11, 2014.

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